Chapter 4. ESI Level 2

This chapter expands on the introduction to the ESI offered in Chapter 3 and discusses in further detail the decisionmaking process necessary to determine which patients meet ESI level-2 criteria. Though the ESI level-2 rating may be seen as subjective, it is based on the experienced ED nurse’s sound clinical judgment. During the ESI triage educational program, a considerable amount of time should be devoted to explaining which types of patients should be categorized ESI level 2. In this chapter, we highlight common patient presentations that meet ESI level-2 criteria.

After the triage nurse has determined that the patient does not require immediate life-saving intervention, he or she must then decide whether the patient should wait. When making this decision, the triage nurse should consider the following question “Would I use my last open bed for this patient?” The following three questions listed in Figure 4-1 should be answered and are key components of ESI level-2 criteria:

1. Is this a high-risk situation?
2. Is the patient experiencing new onset confusion, lethargy, or disorientation?
3. Is the patient experiencing severe pain or distress?

The remainder of this chapter discusses the decision points of ESI level 2 in detail. Many examples are provided that are based on the potential medical diagnoses associated with patients' chief complaints and presenting symptoms. An experienced triage nurse will always assess the patient's chief complaint, presenting signs and symptoms, demographics, and medical history to attempt to identify a high-risk situation. While the purpose of nurse triage is not to make a medical diagnosis, these situations are based on the experienced triage nurse's knowledge of possible medical diagnoses that are associated with specific chief complaints. A good source of information about the signs and symptoms of various medical diagnoses is the Emergency Nursing Core Curriculum® or other emergency nursing textbooks. The following discussion provides some selected examples of high-risk situations. This discussion is not intended to be an exhaustive list. The examples are summarized in Table 4-1.

High-risk Situations

The ability to recognize a high-risk situation is a critical element of the triage decisionmaking process, regardless of the particular triage system used. ESI highlights the importance of recognizing high-risk situations and uses the triage nurse's expertise and experience to identify patients at high risk.

Little has been written about how ED triage nurses make decisions. Knowledge and experience are necessary but not sufficient. The other factor that we have found to be important is gut instinct or the sixth sense. Novice triage nurses should be taught rules of thumb which they can use until they have the confidence and experience upon which to make rapid, accurate decisions. Examples of these rules of thumb include “all women of childbearing age are pregnant until proven otherwise” or “all chest pain is cardiac until proven otherwise.” Novice triage nurses are also taught symptom clustering such as the cardiac cluster of chest pain with nausea, shortness of breath, and diaphoresis. From prior clinical situations ED nurses put together what have been referred to as clinical portraits. The nurse puts into long-term memory particular patient scenarios in which they were involved in some way. For example, the patient with fever, stiff neck, and a meningococcal rash will always come to mind when a patient with a similar complaint presents to triage. The triage nurse needs to draw on all of his or her knowledge and experience with each triage encounter. High-risk situations should be easy for the experienced triage nurse to identify.

Vital signs are often not helpful in the identification of high-risk patients. The patient typically presents...
to the ED with a chief complaint, signs and symptoms, or history suggestive of a problem or condition that is serious and, unless dealt with promptly, can deteriorate rapidly. Often patient age, past medical history, and current medications influence the perceived severity of the chief complaint. For example, a frail elderly patient with severe abdominal pain is at a much higher risk of morbidity and mortality than a 20-year-old. The elderly patient with abdominal pain should be classified as ESI level 2, while the 20-year-old with stable vital signs will usually be classified as ESI level 3. It is common for the triage nurse to identify a high-risk situation which may then be confirmed by finding abnormal vital signs. For example, a patient who complains of a fever and productive cough may be found to have a respiratory rate of 32 and an oxygen saturation of 90 percent. The experienced triage nurse uses knowledge and expertise to recognize that this patient probably has pneumonia, is at risk for desaturating and is therefore high risk. Inexperienced ED nurses are not likely to have the

<table>
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<td>General</td>
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<td>May or may not have fever</td>
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<td>Genitourinary</td>
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<td>Sudden onset of testicular pain</td>
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<td></td>
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<td>Gynecological</td>
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<td>Spontaneous abortion</td>
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<td>Combative, hostile, hysterical</td>
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<td>Suicidal attempt/complaint</td>
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<td></td>
<td>ETOH with trauma</td>
<td></td>
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<tr>
<td>Neurologic</td>
<td>Rule out meningitis</td>
<td>Headache, fever, lethargy</td>
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<td></td>
<td>History of multiple cerebrovascular accidents</td>
<td>Motor or speech deficits</td>
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<tr>
<td></td>
<td>Acute ischemic stroke</td>
<td>Motor or speech deficits</td>
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<tr>
<td>Pediatric</td>
<td>Vomiting, diarrhea, unable to eat</td>
<td>Sunken fontanel, poor skin turgor, lethargy</td>
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<td>Trauma</td>
<td>Motor vehicle crash with transient loss of consciousness</td>
<td>History of head trauma</td>
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<tr>
<td></td>
<td>Stab wound to the groin</td>
<td>Bleeding controlled, obvious stab wound</td>
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Table 4-1. Examples of High-risk Situations
knowledge and expertise to consistently identify high-risk situations and make accurate triage decisions. For this reason, the inexperienced triage nurse is, in fact, a liability at triage, regardless of the particular triage system used. They have not incorporated symptom clustering, clinical portraits, or “gut instinct” into their practice; such approaches are key in identifying the high-risk patient situation. The next section will provide specific examples of high-risk situations.

**Abdominal and Gastrointestinal**

Abdominal pain is a frequent chief complaint in the ED. What makes it high risk? A good history and assessment of current pain rating, respiratory rate, and heart rate are important elements to consider and will help determine the presence of a high-risk situation. Pain rating is only one of many factors to consider. Tachycardia or respiratory distress that accompanies severe abdominal pain can represent shock and would place the patient at high risk. The elderly patient with severe abdominal pain presents another potentially risky situation. Often the elderly experience bowel obstructions, gastrointestinal bleeds, and other abdominal complications associated with significantly higher morbidity and mortality than younger patients. Signs and symptoms of an acute abdomen are important to assess for in all patients with abdominal pain. How long has the patient had the pain? What made the patient come to the ED today? Has the patient had severe nausea, vomiting, or diarrhea? Is the patient dehydrated? Patients with severe “ripping” abdominal pain radiating to the back should be considered to potentially have an abdominal aortic aneurysm. Patients describe the pain as severe, constant, and sudden in onset and may have a history of hypertension.

Patients with abdominal pain are often initially considered ESI level 3 at the beginning of the triage interview, and after the discovery of tachycardia or other risk factors, the triage nurse may determine that the patient is indeed high risk.

Vomiting blood or a chief complaint of blood per rectum should be seriously considered and evaluated in the context of vital signs. A 30-year-old with bright red blood per rectum, normal vital signs, and no other risk factors does not meet criteria for ESI level 2. But the elderly patient who called an ambulance because he started vomiting blood and has a heart rate of 117 and a respiratory rate of 24 is high risk and does meet ESI level-2 criteria.

**Cardiovascular**

Chest pain is also a very common chief complaint. The presentation of acute coronary syndromes (ACS) is not always specific, and it is sometimes difficult to determine the risk of ACS at triage. Patients who have an episode of chest or epigastric discomfort, with or without accompanying symptoms, usually will need an ECG performed rapidly to determine the presence of ACS and need to be identified as high risk-ESI level 2. It is important for the triage nurse to incorporate into his or her knowledge of women and presentational symptoms characteristic of heart disease. The 54-year-old obese female who presents to the ED with epigastric pain and fatigue is at risk of ACS and should be assigned to ESI level 2-high risk. Patients with chest pain that are physiologically unstable and require immediate intervention such as intubation or hemodynamic support should be triaged as ESI level 1. All chest pain patients do not meet level-1 or 2 criteria. For example, a 20-year-old healthy patient with chest pain, cough, and fever of 101°F is at low risk for ACS and does not meet ESI level-1 or 2 criteria. Each patient must be assessed individually. Other high-risk cardiovascular situations would include the possibility of a hypertensive crisis, acute vascular arterial occlusions, and patients who present with a fever post valve replacement.

**Dental, Ear, Nose, and Throat**

Although less common, epiglottitis still exists and represents a potential airway threat. Patients with a peritonsilar abscess are another example of potential airway compromise and both conditions represent a high-risk situation. If a patient with either of these complaints is in immediate danger of airway compromise and requires immediate intervention, level-1 criteria are met. For patients with epistaxis, the triage nurse should obtain a blood pressure, although this is not in the ESI algorithm. Epistaxis could be caused by a posterior nosebleed due to a hypertensive crisis, nose picking by the patient on Coumadin®, or recent cocaine use. In any case, such patients should be classified as ESI level 2, as they represent a high-risk situation.
Environmental

Patients with inhalation injuries should be considered high risk for potential airway compromise. If the patient presents with significant airway distress and requires immediate intervention, they meet level-1 criteria.

Facial

Patients with trauma to the face should be evaluated for possible facial fractures. When present, facial fractures are often associated with other severe trauma and may potentially lead to airway compromise and should therefore be triaged as high risk. Facial trauma with actual airway compromise should be triaged as ESI level 1 to facilitate airway management. High-risk of airway compromise should be triaged as ESI level 2.

General Medical

There are several other general medical complaints that need to be considered for possible high-risk situations. These medical complications include diabetic ketoacidosis, hyper- or hypoglycemia, sepsis, complaints of syncope or near syncope, and a variety of other electrolyte disturbances that may need to be treated immediately. Hyperkalemia in particular is a very high-risk situation that can lead to serious cardiac dysrhythmias. Hyperkalemia might be suspected in a renal dialysis patient exhibiting weakness. Finally, oncology patients with a fever who are undergoing chemotherapy are at risk for sepsis and should be identified as high risk and rapidly evaluated.

Genitourinary

Males with testicular torsion will complain of severe pain, are easily recognized, and require rapid evaluation and surgical intervention, in addition to rapid pain control. Renal dialysis patients unable to complete dialysis are another example of a high-risk genitourinary emergency, since a variety of electrolyte disturbances may be present. Females, and more commonly males, can present to the triage nurse with acute urinary retention. Males over age 65 often present with benign prostatic hypertrophy and the inability to urinate. Males and females can present postoperatively with the inability to void. These patients are in acute distress and require emergency urinary catheterization. These are examples of patients in severe distress who should be categorized as ESI level 2.

Mental Health

Many patients that present with mental health problems are at high risk if they are a danger either to themselves, others, or the environment. Patients who are suicidal, homicidal, psychotic, violent, or present an elopement risk should be considered high risk. Intoxication without signs of trauma or associated risk of aspiration does not represent a high-risk criterion. The intoxicated patient needs to be carefully assessed for signs of trauma or behavioral issues related to alcohol use or past medical history. Either could represent a high-risk situation and the patient would be categorized ESI level 2.

Neurological

Patients with severe headache associated with mental status changes, high blood pressure, lethargy, fevers, or a rash should be considered high risk. Any patient with sudden onset of speech deficits or motor weakness should also be assigned ESI level 2. Patients with these symptoms may be experiencing an acute stroke and immediate evaluation is critical. Time from onset of symptoms is a critical factor in determining treatment options, in particular fibrinolytic or other therapies. A patient with no past medical history of headaches that presents to the emergency department with the sudden onset of a headache should be identified as high risk for a subarachnoid bleed. The patient will often describe exactly what they were doing when the headache began, typically after lifting, having a bowel movement, or after sexual intercourse.

Obstetrical and Gynecological

Females with abdominal pain or vaginal bleeding should be carefully assessed and vital signs obtained if there is no obvious life threat. Pregnancy history and last menstrual period should always be ascertained from all females of childbearing age. The triage nurse should assess for signs and symptoms of the following conditions in late pregnancy: abruptio placenta and placenta previa. In early pregnancy the triage nurse should assess for signs and symptoms of ectopic pregnancy and spontaneous abortion. All pregnant patients 14 to 20 weeks and over should be seen by a physician rapidly, according to individual institutional policy. A postpartum patient with a chief complaint of heavy vaginal bleeding should also be seen by a physician urgently. Any female patient, whether pregnant or
postpartum, who presents with significant hemodynamic instability and is in need of immediate life-saving interventions should be triaged as ESI level 1.

**Ocular**

Patients with trauma to the eye, sudden partial or full loss of vision, or a chemical splash to the eye are at high risk for permanent damage to the eye and should be triaged at ESI level 2. Conditions associated with some type of visual loss include central retinal artery occlusion, acute narrow-angle glaucoma, and retinal detachment. Trauma to the eye can result in a globe rupture and hyphema. Chemical splashes to the eye, particularly alkali, necessitate immediate flushing to prevent further damage to the cornea. All of these conditions require immediate evaluation and treatment to prevent further complications or deterioration. These patients meet ESI level-2 criteria. While immediate irrigation is necessary, it is not considered life-saving and thus these patients do not meet ESI level-1 criteria.

**Orthopedic**

Patients with signs and symptoms of compartment syndrome are at high risk for extremity loss and should be assigned ESI level 2. Other patients with high-risk orthopedic injuries include any extremity injury with compromised neurovascular function, partial or complete amputations, or trauma mechanisms identified as having a high-risk such as serious acceleration or deceleration. Patients with possible fractures of the pelvis, femur, or hip and other extremity dislocations should be carefully evaluated and vital signs considered. These fractures can be associated with significant blood loss. Again, the need for immediate life-saving intervention in hemodynamically unstable patients will meet ESI level-1 criteria.

**Pediatrics**

It is not uncommon for the triage nurse to be uncomfortable when making triage acuity decisions about children, especially infants. It is important to obtain an accurate history from the caregiver and evaluate the activity level of the child. The child who is inconsolable or withdrawn may be at high risk of serious illness. The following conditions are examples of high-risk situations for children:

- Seizures.
- Sepsis, severe dehydration.
- Diabetic ketoacidosis.
- Child abuse, burns.
- Head trauma.
- Vitamins/iron or other overdoses/ingestions.
- Infant less than 28 days of age with a fever of 100.4°F or 38°C, or greater.

**Transplant**

Patients who are status post organ transplant are usually ill and considered high risk. They can present with organ rejection, sepsis, or other complications. Patients who are on a transplant list are also usually considered high risk.

**Respiratory**

There are many respiratory complaints that place patients at high risk. Patients with mild-to-moderate distress should be further evaluated for respiratory rate and pulse oximetry to determine whether they should be categorized ESI level 2. Patients in severe respiratory distress that require immediate life-saving intervention such as intubation meet level-1 criteria. The high-risk patient is one who is currently ventilating and oxygenating adequately but is in respiratory distress and has the potential to rapidly deteriorate. Potential etiologies of respiratory distress may include asthma, pulmonary embolus, pleural effusion, pneumothorax, foreign body aspiration, toxic smoke inhalation, or shortness of breath associated with chest pain.

**Toxicological**

Most patients who present with an overdose should be rapidly evaluated and represent a high-risk situation. It is often difficult to determine which drugs were taken and the quantities actually consumed. If the patient has taken an intentional overdose, and admits to suicidal ideation, this meets criteria for a high-risk situation. A patient who is apneic on arrival or requires other immediate life-saving interventions should be categorized an ESI level 1; all other admitted overdoses should be considered ESI level 2.

**Trauma**

Frequently, patients who have been involved in a traumatic event are at high risk for injury, although no obvious injuries may be apparent. Any mechanism of injury associated with a high risk of injury should be categorized ESI level 2, unless they
present with unstable vital signs and require immediate intervention. These patients should be triaged as ESI level 1. Serious injury results from the transfer of mechanical or kinetic energy and is caused by acceleration forces, deceleration forces, or both. Motor vehicle and motorcycle crashes, victims of falls, and gunshot and stab wounds are examples of blunt and penetrating trauma, which should be assessed carefully for potential for serious injury. The triage nurse should obtain the following details regarding the injury: age of the patient, pre-existing conditions of the patient and environment, distance the patient fell or jumped, how fast the vehicle was moving, history of loss of consciousness, location of penetrating injury, and type of weapon. Again, the nurse will draw from his or her knowledge of biomechanics and mechanism of injury to assess the patient and decide whether they meet ESI level-2 criteria. Gunshot wounds to the head, neck, chest, or groin usually require trauma team evaluation and immediate interventions and should be triaged as ESI level 1.

**Wound Management**

What makes a wound high risk? Is there uncontrolled bleeding? Is there arterial bleeding? Is this a partial amputation? How was the wound sustained and does the mechanism of injury leave the patient at high risk for other traumatic complications? Most wounds do not meet the criteria for ESI level 2. A patient with a stab wound to the subcutaneous tissue of the thigh with controlled bleeding and good distal neurological function can be classified as ESI level 4. Any uncontrolled bleeding that requires immediate life-saving intervention to stabilize the patient meets level-1 criteria.

**Confusion/Lethargy/Disorientation**

The second question to consider when determining whether a patient meets level-2 criteria is “Does the patient have new onset confusion, lethargy, or disorientation?” Altered mental status is another frequent chief complaint. Family members, friends, or paramedics may accompany these patients to the ED. At decision point B of the ESI algorithm, the presence of confusion, lethargy, or disorientation refers to new onset or an acute alteration in level of consciousness (LOC). Chronic dementia and confusion do not meet criteria for ESI level 2. Confusion, lethargy, or disorientation may be caused by a variety of serious medical conditions including stroke, transient ischemic attack, and other structural pathology to the brain, metabolic, and electrolyte imbalances such as hypoglycemia or hyponatremia and toxicological conditions.

This portion of the algorithm is usually very clear and leaves very little open to interpretation. If the patient’s history is unknown and the patient presents to triage confused, lethargic or disoriented, the triage nurse should assume this condition is new and select ESI level 2 as the triage category. Again, if the patient has new onset confusion, lethargy or disorientation and requires an immediate life-saving intervention as previously described, the patient then meets ESI level-1 criteria.

**Severe Pain/Distress**

The final question to address when determining whether the patient meets level-2 criteria is “Does the patient have severe pain or distress?” The patient should be assessed for the presence of severe pain or distress. All patients who have a pain rating of 7/10 or greater should be considered for meeting ESI level-2 criteria. Considered is a very important word. It is up to the discretion of the triage nurse to determine whether the clinical condition and pain rating in combination warrant a rating of ESI level 2. For example, a patient who had a heavy metal object fall on his toe may rate the pain a 10/10. Indeed, the patient may have a fracture and is experiencing severe pain. The patient probably has done nothing to try to relieve the pain prior to arrival in the ED. The correct triage level for this patient would be ESI level 4. Only one resource will be needed (an x-ray). The triage nurse should implement comfort measures at triage including ice, elevation, and analgesics (if standing orders are in place) to reduce the pain. The triage nurse should believe the patient’s pain is 10/10 and address the pain at triage. However, this patient can wait to be seen and you would certainly not use your last open bed for this patient. In summary, the triage nurse assesses not only the pain intensity rating provided by the patient, but also the chief complaint, past medical history and physiologic appearance of the patient when determining a triage category. Examples of patients for whom the triage nurse could use severe pain criteria to justify an ESI level-2 rating include:

- A patient with 10/10 flank pain who is writhing at triage.
• An 80-year-old female with 7/10 generalized abdominal pain with severe nausea.
• A 30-year-old patient in acute sickle cell pain crisis.
• An oncology patient with severe pain.
• Any full- or partial-thickness burn that will require immediate pain control.

All ED patients are to be assessed for pain and asked to rate their pain using a scale such as the visual analog scale. Many triage nurses are uncomfortable with documenting a patient’s pain rating and then having them wait to be seen. It is important for the triage nurse to understand that the patient’s self-reported pain rating is only one piece of the pain assessment. For example, all ED triage nurses have triaged patients who are laughing, talking on their cell phone or eating chips but report their pain is 10+. Triage nurses should assign ESI level 2 if the patient reports a pain rating of 7/10 or greater and the triage nurse’s subjective and objective assessment confirms that the patient’s pain requires interventions that are beyond the scope of triage. The triage nurse concludes that it would be inappropriate for this patient to wait and they would assign this patient to the last open bed.

Finally, in determining whether a patient meets ESI level-2 criteria, the triage nurse must assess for severe distress, which is defined as either physiological or psychological. In addition to pain, patients experiencing severe respiratory distress meet criteria for ESI level 2 for physiological disturbances. Examples of severe psychological distress include patients who are:
• Distraught after experiencing a sexual assault.
• Exhibiting behavioral outbursts at triage.
• Combative.
• Victims of domestic violence.
• Experiencing an acute grief reaction.

These are patients that the triage nurse usually prefers to have placed in the treatment area immediately so as to have the patient avoid the waiting room.

**Summary**

We have reviewed the key components and questions that need to be answered to determine whether a patient meets ESI level-2 criteria. It is critical that the triage nurse consider these questions as he or she triages each patient. “Missing” a high-risk situation may result in an extended waiting period and potentially negative patient outcomes.

**Reference**